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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,294	08/27/2001	Samuel Anderson	36-1493	4036

7590 03/09/2007  
Nixon & Vanderhye  
1100 North Glebe Road 8th Floor  
Arlington, VA 22201-4714

EXAMINER
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FRENEL, VANEL

ART UNIT	PAPER NUMBER
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3627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/914,294

Applicant(s)

ANDERSON ET AL.

Examiner

Vanel Frenel

Art Unit

3627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This communication is in response to the application filed on 08/27/01. Claims 1-22 are pending.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters et al (5,884,284) in view of Hogan (5,699,528).

(A) As per claim 1, Peters discloses a method of generating a bill image in a computer-implemented billing system, the billing system being configured to generate bills relating to the use of a telecommunication network, the method including the steps of assigning a charge type identifier (CTI) to each of a number of usage records (See Peters, Col.29, lines lines 3-20) and processing each usage record in dependence on its assigned CTI to produce a bill image (See Peters, Col.17, lines 39-67 to Col.18, line 23).

Peters does not explicitly disclose that the method having a format of the bill image being dependent on the CTIs of the usage records.

However, this feature is known in the art, as evidenced by Hogan. In particular, Hogan suggested that the method having a format of the bill image being dependent on the CTIs of the usage records (See Hogan, Col.4, lines 36-67 to Col.5, line 43).

IT would have been obvious to one of ordinary skill in the art at the time of the invention to have included the feature of Hogan within the system of Peters with the motivation of providing a server computer formats the bill information in the form of e-mail messages and deliver them to the e-mail addresses of the responsible users (See Hogan, Col.2, lines 48-50).

(B) As per claim 2, Peters discloses a method according to claim 1 in which a CTI is assigned to each usage record in accordance with a set of rules (See Peters, Col.4, lines 62-67 to Col.5, line 8).

(C) As per claim 3, Hogan discloses a method according to claim 1 or 2, in which the processing of each usage record includes the step of assigning a unique sort key to the usage record in dependence on its CTI for defining the relative position of the usage record in the bill image (See Hogan, Col.4, lines 36-67 to Col.5, line 43).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

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(D) As per claim 4, Peters discloses a method according to claim 2, in which the sort key is generated in dependence on the CTI and a number of fields associated with the usage record (See Peters, Col.19, lines 4-38).

(E) As per claim 5, Hogan discloses a method according to claim 3 or 4, in which the sort key is generated in accordance with a set of rules (See Hogan, Col.10, lines 14-64).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(F) As per claim 6, Peters discloses a method according to any of claims 3 to 5, in which the usage subsequently sorted according to their respective sort keys to create a sorted list (See Peters, Col.19, lines 10-21).

(G) As per claim 7, Hogan discloses a method according to claim 6, in which the sorted list is processed to generate, when appropriate, and in dependence on the CTIs of the usage records, a number of text inserts to precede or follow a usage record or group of usage records in the bill image (See Hogan, Col.4, lines 36-67 to Col.5, line 15).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(H) As per claim 8, Hogan discloses a method according to claim 7, in which each CTI is associated with a position in a text map, in which a change in position in the text map triggers the generation of a text insert, and in which generating the text inserts comprises the steps of determining the text map position for a usage records CTI, comparing the position with that determined for the previous usage record, and inserting an appropriate text insert if a change in position in the text map occurs (See Hogan, Col.6, lines 9-30).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(I) As per claim 9, Hogan discloses a method according to claim 8, in which the text map is a tree hierarchically defining the order in which text inserts are to appear in the bill image (See Hogan, Col.4, lines 53-67).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(J) As per claim 10, Hogan discloses a method according to claim 9, in which the text map position for each CTI is a leaf node in the tree (The Examiner interprets program to contain a leaf node in the tree since it is a part of programming language or software See Hogan, Col.10, lines 13-46).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(K) As per claim 11, Hogan discloses a method according to claim 9 or 10, in which each branch between a parent node and a child node in the tree represents text to be inserted in the bill image (See Hogan, Col.4, lines 53-67).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(L) As per claim 12, Hogan discloses a method according to any preceding claim, including the step of generating a bill image record in the bill image for a number of the usage records, the format and content of each bill image record being dependent on the CTI of the respective usage record or usage records (See Hogan, Col.4, lines 53-67).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(M) As per claim 13, Hogan discloses a method according to claim 12, in which a bill image record is generated for a plurality of usage records having a common CTI (See Hogan, Col.5, lines 1-15).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(N) As per claim 14, Hogan discloses a method according to any preceding claim, in which a number of hidden records are generated in the bill image, the hidden records containing data used to create the bill image (See Hogan, Col.4, lines 53-67).

The motivation for combining the respective teachings of Peters and Hogan are as discussed in the rejection of claim 1 above, and incorporated herein.

(O) As per claim 15, Hogan discloses a method according to claim 14, in which the data contained in the hidden records enables the disassembly, modification and reassembly of the bill image to create a fresh bill image (See Hogan, Col.4, lines 53-67).

(P) As per claim 23, Peters discloses a computer implemented billing system arranged to perform the following operations: assign a charge type identifier (CTI) to each of a number of usage records (See Peters, Col.29, lines lines 3-20), and, process each usage record in dependence on its assigned CTI to produce a bill image (See Peters, Col.17, lines 39-67 to Col.18, line 23).

Peters does not explicitly disclose that the method having a format of the bill image being dependent on the CTIs of the usage records.

However, this feature is known in the art, as evidenced by Hogan. In particular, Hogan suggested that the method having a format of the bill image being dependent on the CTIs of the usage records (See Hogan, Col.4, lines 36-67 to Col.5, line 43).



IT would have been obvious to one of ordinary skill in the art at the time of the invention to have included the feature of Hogan within the system of Peters with the motivation of providing a server computer formats the bill information in the form of e-mail messages and deliver them to the e-mail addresses of the responsible users (See Hogan, Col.2, lines 48-50).

4. Claims 16- 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters et al (5,884,284) in view of Hogan (5,699,528) as applied to claims 1-15 above, and further in view of Kang et al (5,793,852).

(A) As per claim 16, the combination of Peters and Hogan do not explicitly disclose a method according to any preceding claim, further comprising the steps of generating a time line over at least a part of which a discount scheme applies, dividing the time line into a number of segments each of which corresponds to a period during which a respective version of the discount scheme was operative, accumulating charges from usage records for calls made during each segment, calculating an appropriate discount from each of the accumulated charges, generating a usage record for each discount, and subsequently assigning a CTI to each of the generated usage records to create a number of discount usage records.

However, this feature is known in the art, as evidenced by Kang. In particular, Kang suggested that the method having a method according to any preceding claim, further comprising the steps of generating a time line over at least a part of which a discount scheme applies, dividing the time line into a number of segments each of

which corresponds to a period during which a respective version of the discount scheme was operative (See Kang, Col.7, lines 1-42), accumulating charges from usage records for calls made during each segment (See Kang, Col.8, lines 18-64), calculating an appropriate discount from each of the accumulated charges (See Kang, Col.8, lines 50-67), generating a usage record for each discount, and subsequently assigning a CTI to each of the generated usage records to create a number of discount usage records (See Kang, Col.13, lines 1-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have included the feature of Kang within the collective teachings of Peters and Hogan with the motivation of providing a method of processing information charge discount rates for service subscribers in an Premium-rate service in which each service subscriber designates desired information charge discount rates for a specific time (time of day), a specific day (day of week), a specific date (day of year), and a holiday to apply the designated information charge discount rates to service users (SeeKang, Col.2, lines 1-7).

(B) As per claim 17, Kang discloses a method in which call usage records are accumulated by call type, the call type being obtained for the call usage records from a mapping of CTI to call type (See Kang, Col.1, lines 312-57).

The motivation for combining the respective teachings of Peters, Hogan and Kang are as discussed in the rejection of claims 1 and 16 above, and incorporated herein.

(C) As per claim 18, Kang discloses a memory comprising a data structure stored in the memory defining an electronic bill image having a number of records, each record having an assigned charge type identifier, in which the format of the bill image is dependent on the charge type identifiers of the respective records.

The motivation for combining the respective teachings of Peters, Hogan and Kang are as discussed in the rejection of claims 1 and 16 above, and incorporated herein.

(D) As per claim 19, Kang discloses a memory according to claim 18, in which the bill image is created in accordance with the method of any of claims 1 to 15 (See Kang, Col.4, lines 15-29).

The motivation for combining the respective teachings of Peters, Hogan and Kang are as discussed in the rejection of claims 1 and 16 above, and incorporated herein.

(E) As per claim 20, Kang discloses a computer implemented billing system comprising at least one computer readable memory storing computer executable instructions for performing the method of a selected one of claims 1 to 17 (See Kang, Col.4, lines 5-29).

The motivation for combining the respective teachings of Peters, Hogan and Kang are as discussed in the rejection of claims 1 and 16 above, and incorporated herein.

(F) As per claim 21, Kang discloses a system according to claim 20, comprising a computer readable memory storing a set of rules used to assign a CTI to a usage record (See Kang, Col.4, lines 5-29).

The motivation for combining the respective teachings of Peters, Hogan and Kang are as discussed in the rejection of claims 1 and 16 above, and incorporated herein.

(G) As per claim 22, Kang discloses a system according to claim 20 or 21, comprising a computer readable memory storing a set of rules used to generate a sort key for a usage record (See Kang, Col.10, lines 23-67).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited but not the applied prior art teaches method of selecting the most cost effective cellular service plan provided by cellular telephone resellers to multi-line customers (5,027,388) and telecommunications access cost management system (6,032,132).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanel Frenel whose telephone number is 571-272-6769. The examiner can normally be reached on 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zeender Ryan Florian can be reached on 571-272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

V.F  
V.F

February 26, 2007

*Michael Cuff* 3/5/07  
**MICHAEL CUFF**  
**PRIMARY EXAMINER**